Can You Trust a Dictator: An Endogenous Model of Authoritarian Regimes’ Signing and Compliance with International Treaties

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Abstract

I combine Lai and Slater's (2006) two-dimensional authoritarian typology with Putnam's (1988) logic of two-level games to build a theory of variation in regime tendencies to reach and comply with international agreements. More constrained leaders sign fewer international agreements, but have higher compliance rates. Specifically, leaders of oligarchic regimes are more constrained than leaders of personalist regimes, as a result of the lower power concentration in the hands of the executive. Similarly, leaders of military regimes are more constrained than leaders of civilian regimes, due to the higher risk of an irregular removal. I also argue that reaching and complying with agreements are strategic behaviors and depend on the regime type of the other negotiating party.

* A previous version of this paper were presented at the 2011 Journeys in World Politics Conference at the University of Iowa. I would like to thank Sara Mitchell, Fred Boehmke, Caroline Hartzell, Leah Wells Windsor, Felicity Vabulas, Erik Tillman, Patrice McMahon, Vanessa LeFler, Nick Martini, Mark Nieman, and all participants of the World Models Seminar at the University of Iowa for their comments and advice. Any errors are my own.
Introduction

In protest of the 2008 Russian-Georgian war, Ukraine's President Viktor Yushchenko announced that he no longer intended to renew the territorial agreement with Russia regarding the lease of the Crimean peninsula. The peninsula had been home to the Russian Black Sea fleet since 1783, with the lease extending until 2017 (Rodriguez 2008). Unsurprisingly, the threat to evict the Russian fleet from the Crimea had not been taken favorably by Moscow. The animosity between Ukraine and Russia and uncertainty over the issue had continued to escalate throughout the presidency of pro-Western Viktor Yushchenko--a period also characterized by a number of democratic changes (Lynch 2006). The tensions, however, quickly vanished when the Crimean issue was resolved in Russia's favor after the election of reactionary and pro-Russia candidate Viktor Yanukovich (Russian Federation 2010), whose rule has been largely perceived as a reversal to authoritarianism (Marson 2010). Some view the Crimean lease renewal as pre-determined given Ukraine's geopolitical position; others credit the outcome to the ideological shift in Kiev; yet others speculate on whether Ukraine could have gotten a better deal had it not reversed to authoritarianism. The goal of this paper is to explore the latter proposition and to improve our knowledge of the conditions under which different types of authoritarian regimes sign agreements and uphold them.

Even a brief survey of international relations (IR) literature demonstrates the breadth of scholarly knowledge on democratic participation in international agreements (for example, see Dixon and Senese 2001; Gaubatz 1996; Kegley and Raymond 1990; Slaughter 1995; Simmons 1998; Leeds et al 2009; Ellis, Mitchell and Prins 2010). The subject of variation within
authoritarian\(^1\) regimes' participation in such agreements, on the other hand, has only been breached by a few scholars.\(^2\) Since nearly half of the world's states are governed by authoritarian leaders\(^3\), a better understanding of their cooperative tendencies makes for a worthy contribution to the study of IR.

I study authoritarian tendencies to enter and comply with international agreements by exploring the institutional incentives created by various authoritarian structures. More specifically, I rely on the logic of two-level games to argue that the propensity to enter and comply with international agreements is affected by the size of domestic *win sets* (Putnam 1988).\(^4\) Win set size, in turn, depends on the number of domestic constraints on leaders' foreign policy-making. This framework leads to the expectation that leaders with smaller win sets reach fewer international agreements, but are more likely to comply with the agreements that they do sign, compared to the leaders with larger win sets. In addition, I argue that both agreement formation and compliance must be studied as strategic decisions made with consideration of the other party's (state B) expected behavior. Hence, explaining these decisions requires accounting for both state A and B's institutional features.

To capture the variation in institutional incentives provided by different types of autocracies, I use the authoritarian regime typology developed by Lai and Slater (2006). This typology aligns authoritarian regimes along two dimensions: despotic power (personalist vs.

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\(^1\) Note that the terms "authoritarian", "autocratic", and "non-democracies" are used interchangeably.

\(^2\) The few studies that have looked at this tend to focus on human rights treaties. For example, see Hafner-Burton & Tsutsui (2005, 2007) and Hathaway (2002, 2007). The current paper, however, adopts a more refined categorization of authoritarian regimes than the one used previous papers.

\(^3\) In Polity IV Project dataset, 497\% (79 out of 159) of states for which data is available for 2006 are coded as non-democracies (Marshall et al 2007).

\(^4\) *Win set* is defined as the set of all domestic agreements acceptable that would "win" the support of the relevant domestic players by an "up" or "down" vote (Putnam 1988: 437).
oligarchy) and the type of infrastructural power (military vs. party). As shown in Table 1, the four distinct regime types that are generated by this typology are strongman, bossism, junta, and machine. Strongman is a regime type with high power concentration (a personalist regime) that depends on military for enforcement. Though also characterized by high power concentration, bosses rely for enforcement on party infrastructure. The two types of oligarchic regimes are junta and machine. While deriving their power from the military, similar to strongmen, juntas are characterized by greater power-sharing. Finally, machines are represented by a power-sharing arrangement among ruling elites and derives political support from a party. This typology is consistent with the two institutional features that serve as the central causal mechanism explored in this paper.

[Table 1 here]

I translate this typology into empirical predictions by arguing that, on the power concentration dimension, bosses and strongmen are less constrained than machines and juntas, as the chief executives in the former two regimes have fewer institutional constraints on their power. Explicit institutional constraints, such as legislatures, courts, or constitutional provisions that distinguish oligarchic and personalist regimes is not the only meaningful type of possible constraints. The other dimension of the authoritarian typology used here—the variation in the locus of infrastructural power—suggests a different source of variation is regime constraints, such as the threat of an irregular removal from office (Goemans 2008). Although less explicit and

5 Note that in this paper, personalist regimes defined as regimes with relatively low constraints on the chief executive and measured accordingly, using the Executive Constraints variable of the Polity IV dataset (Marshall et al 2007). The literature, however, offers some alternative definitions. Wright (2009), for example shows that according to Geddes' (1999) typology, personalist regimes do not necessarily have smaller winning coalitions than non-personalist regimes. I provide a more detailed discussion on the differences between Geddes (1999) typology and the typology used here in the theory section.
thus unlikely to be captured by measures that code observable institutional constraints, this type of constraints may prove no less important. I explore this source of variation in constraints by arguing that strongmen and juntas are more constrained than bosses and machines, as leaders of military regimes face a greater threat of an irregular removal from office.

Consistent with my theoretical expectations, I find that when one of the negotiating parties (either state A or state B) is a boss—a regime type with fewer constraints on the power concentration dimension—the probability of reaching an agreement statistically increases in comparison to that of democracies. Interestingly, in their probability of reaching agreements, democracies are statistically indistinguishable from the two oligarchic regime types—juntas and machines. Moreover, for any side A regime type, a settlement attempt is significantly more likely to result in an agreement when it is negotiating with a boss rather than a strongman or a junta—the two regimes with more constraints on the infrastructural power dimension—while there is no statistical difference in the probabilities of reaching an agreement with a boss and a machine.

When it comes to compliance with agreements, strongmen and bosses—less constrained on the power concentration dimension—are the least likely to comply both in comparison to democracies and juntas. Machines and juntas—regime types with more institutional constraints—exhibit compliance rates that are statistically indistinguishable from those of democratic states, yet juntas demonstrate higher compliance rates than machines, when compared directly to each other. Finally, side A is more likely to renege on an agreement when the other party to the agreement is a boss or a machine—regimes that are less constrained in on the infrastructural power dimension—than a democracy.
This paper proceeds in the following way. The first section discusses the state of the literature on authoritarian participation in international treaties and lays out the main theoretical argument used in this paper. I then proceed to discuss several alternative typologies of authoritarian regimes, highlighting the advantages and the fit of Lai and Slater's (2006) approach to my theoretical argument. Next, I explicitly map my theoretical arguments to Lai and Slater (2006) authoritarian typology and state several testable hypotheses. After describing the research design, I test my hypotheses using data on contentious territorial, maritime, and river claims obtained from the Issue Correlates of War (ICOW) (Hensel et al. 2008). I account for the endogeneity between reaching agreements and compliance by using a two-stage Heckman probit model. I conclude by discussing the results, the contributions, and the broader implications of this research agenda for the study of IR.

**Regime Type and International Behavior**

There is a general agreement in the literature that, in respect to many types of international behaviors, democracies "tread more lightly" than autocracies. A large body of literature, for example, shows that democratic leaders tend to strategically "select" themselves in the wars that they are likely to win (among others, see Reiter and Stam 2002; Fearon 1994a, 1997). The literature on international treaties participation finds similar results: Leeds (2003a), for example, shows that democracies are more likely to honor international alliance commitments; von Stein (2005) demonstrates that democracies are less likely to sign, but more likely to comply with international human rights treaties (see also Dai 2007; Fearon 1994a, 1997; Leeds 1999, 2003b, 2009; Tomz 2008).

6 The ICOW data and documentation are available at http://www.icow.org.
Such behavioral variation among regime types has long attracted scholarly attention, as settlement of international territorial claims and subsequent compliance are generally viewed as desired by all leaders, all else held constant (Chays and Chays 1999). Outstanding claims create uncertainty and expectation of possible conflict outbreak, which drives up the investment risks. A failure to reach an agreement over the use of a particular territory may adversely affect the profits of domestic businesses by increasing their transaction costs or limiting their use of particular resources. As a result, claim settlement is generally preferred by all leaders, yet not all leaders are equally effective at reaching acceptable terms of agreements.

Breaking international commitments is generally disapproved of by a leader's domestic base and involves reputation costs that impair a leader’s ability to negotiate successfully in the future (Sartori 2005; Weeks 2008). A leader who lacks international credibility is undesirable for both domestic elites and international community and faces high risks of electoral punishment (Smith 1998; Tomz 2008). Even elites who support a leader’s decision to renege *ex ante* may find such a leader undesirable *ex post*, since reneging may decrease the effectiveness of future negotiations (Weeks 2008: 42). In addition, reneging on one’s word conveys information about a leader’s competence in general, thus decreasing her attractiveness to her supporters (Smith 1998; Weeks 2008).

The behavioral variation associated with different regime types is often explained using the logic of audience costs, that attributes differences in leaders' behavior to their likelihood of facing an *ex post* electoral punishment (McGillivray and Smith 2006, 2008; Partell and Palmer 1999; Ramsay 2004; Smith 1998). Intuitive as they may seem, however, theories derived from the audience costs logic are difficult to test (Schultz 2001). First, leaders probabilities of suffering an electoral punishment as a result of a particular policy are usually unobservable and
hard to measure or estimate empirically. Even when there is a way to measure the degree of 
audience costs, leaders are likely to incorporate these costs into their expected utility 
calculations. As a result, rather than focusing on audience costs directly, more recent studies 
have focused on observable incentives created by varying institutional contexts, such as the 
number of institutional veto players (Mansfield and Milner 2010), or the availability of a leader-
specific punishment (McGillivray and Smith 2006, 2008).

Acknowledging this renewed focus on observable mechanisms, this study models the 
effects of institutional incentives created by different regime types using the logic of two-level 
argue that leaders' likelihood of reaching and complying with international agreements depends 
on the size of their domestic win set. Win set is defined as the set of all domestic agreements 
acceptable that would "win" the support of the relevant domestic players by an "up" or "down" 
vote (Putnam 1988: 437). The size of domestic win set depends, in turn, on the number of 
domestic institutional constraints on leader's decision-making, such as the number of relevant 
domestic veto players. 7 The size of a win set decreases with the number of such constraints. 
Leaders constrained in their win set effectively come to the international negotiating table with 
their hands "tied." Few proposals for an agreement are accepted "as is": even the most 
straightforward proposals will likely undergo some discussion that may lead to amendments. In 
the presence of multiple veto players, however, even minor amendments may lead to a total 
unraveling of the supporting domestic coalition. As a result, leaders with relatively smaller win 
sets will generally reach fewer international agreements (Putnam 1988: 438).

7 Veto players are defined as domestic actors whose support is necessary for the domestic acceptance of the 
agreement (Mansfield and Milner 2010).
Proposition 1: Leaders with smaller win sets are less likely to enter international treaties than leaders with larger win sets.

Such a restricted ability of reaching agreements, however, is actually a bargaining advantage in international negotiations. Leader's inability to amend the initially proposed agreement means that the few agreements that are reached will fall close to state A's ideal point. The logic is that leaders with large win sets are more likely to be "pushed around" by the international negotiators, as such negotiators know that agreements with domestically unconstrained leaders are unlikely to break down at the domestic level. Leaders with small domestic win sets, on the other hand, have a much stronger negotiating position. They come to the international negotiating table with a much smaller range of domestically acceptable agreements (Putnam 1988: 440). Such a bargaining advantage of leaders with small win sets then allows such leaders to reach more favorable agreements, and hence ensures that such leaders will be more likely to comply with the agreements they reach.

Proposition 2: Leaders with smaller win sets are more likely to comply with international agreements than leaders with larger win sets.

Although the logic of win sets as it applies to the study of international negotiations has been used before, most existing studies have focused on explaining the difference between democracies and autocracies, with few studies addressing the variation in behavior of different types of authoritarian regimes. The implications of the win set theory, however, need not stop at the basic democracy/autocracy distinction. As noted by Putnam (1988: 440), the theory can explain behavioral variation among any regimes that differ in terms of leader's control of domestic ratification process of international agreements. Democratic leaders are typically constrained by constitutional provisions requiring agreements to win support of an electoral
majority, such as two-thirds of the US Senate in the US or a simple majority of the Bundestag in Germany (König and Hug 2000: 100). The lack of an electoral majority requirement in authoritarian regimes does not, however, necessarily imply that authoritarian leaders are unconstrained in entering international agreements. In other words, even in the absence of a majority ratification requirements, authoritarian leaders have varying degrees of autonomy and discretion in entering international treaties. In 1930, for example, in accordance with the Meiji Constitution, the Japanese military was given a role in the ratification of the London Naval Treaty (Putnam 1988: 437). The degree of such autonomy depends on the specific institutional context in which they operate.

Classification of Authoritarian Institutions: Infrastructural vs. Despotic Power

One of the primary explanations for the gap in the literature on authoritarian compliance is that, until recently, there did not exist a clear classification of non-democracies. In identifying regime types, most quantitative studies have relied on Polity scores (Marshall et al 2007) that simply do not allow for a nuanced differentiation among regime types (see, for example, Leeds 1999; Lai and Reiter 2000; Gartzke and Gleditsch 2004). In such studies, regime type is operationalized either dichotomously (democracy or non-democracy) or on a unidimensional scale (from less to more democratic).

Many scholars argue that that such a simplified conceptualization of regime type introduces important limitations (Geddes 1999; Reiter and Tillman 2002; Peceny et al 2002). One such limitation is that authoritarian regimes are treated as a residual category. As a result, regimes that have very little similarity are often coded as the same authoritarian type. For example, according to Polity scores, Kim-Il-sung’s Communist North Korea and Park Chung-hee’s military dictatorship of South Korea are coded as similar regimes. The two regimes,
though, had very little in common beyond their non-democratic nature. North Korea was a single-party state deriving legitimacy from its leader’s strong cult of personality, while South Korea was a personalist dictatorship reliant on the military for support.

An alternative and more realistic categorization of regimes has been developed by Bueno de Mesquita et al (2003). In their model, regimes are categorized in accordance with the size of the ruler’s selectorate\(^8\) and the winning coalition needed to stay in office. For instance, in the United States and other democracies, the size of the winning coalition is large, since the selectorate includes almost the entire population. On the contrary, the power of a dictator is derived from the support of a small number of elite supporters. For example, the rulers of Communist countries are often elected by a small number of top party officials (e.g. China 1976-present), despite universal suffrage “on paper.”

This operationalization, however, is also unidimesional.\(^9\) Although it distinguishes between democracies and non-democracies using a measure of power concentration, this typology still misses other sources of variation among autocracies, such as the military/civilian dimension. By treating the military nature of regimes as a component of an additive index, this measure makes a theoretical assumption that “[m]ilitary regimes […] have particularly small coalitions” (Bueno de Mesquita et al. 2003: 134), precluding the possibility of variation within and between these types. For example, the personalist military dictator Idi Amin of Uganda may have had fewer constraints than the military leaders of Argentinian junta governments.

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\(^8\) The selectorate refers to all the citizens that can take part in leader's selection (Bueno de Mesquita et al 2003).

\(^9\) Bueno de Mesquita et al (2003) operationalize the size of the winning coalition using, W, 0-4 index which adds a point (1) if a regime is coded as military by the Banks dataset, (2) if a regime is greater or equal to 2 on XRCOMP variable of the Democracy score from the Polity dataset, (3) if XROPEN is greater than 2, (4) if PARCOMP is equal to 5 (Bueno de Mesquita et al. 2003, Ch. 2).
Recent attempts at further reification of the regime type measure resulted in classifying authoritarian regimes in accordance to the main locus of power, or “despotie power” (Mann 1988). This dimension identifies an important source of variation in authoritarian behavior, depending on whether they rely on a civilian or a military institution for policy enforcement. Military and civilian regimes differ sharply in terms of their constraints on leaders' decision-making. Military regimes, for instance, are usually short-lived, as they typically only stay in power until the situation is stable enough to transfer power back under civilian control (Geddes 1999). In addition, military regimes are less stable and more prone to experience coup d’états than their civilian counterparts (Lai and Slater 2006).

This criterion typically generates categorization of authoritarian regimes into personalist, single-party, and military (Geddes 1999; Brooker 2000; Peceny et al 2002; Weeks 2008). The weakness of this measure is its treatment of the locus of power as the only meaningful difference among authoritarian regimes, ignoring the size of the leader's selectorate (Lai and Slater 2006). Building on Slater (2003), Lai and Slater (2006) argue that variation in authoritarian regimes may not be captured on a single dimension. Instead, a two-dimensional typology might be in order, with the first dimension measuring the size of the selectorate (personalist or oligarchic), and the second dimension assessing the locus of power (military or party-based) (recall Table 1). Personalist regimes that depend on military enforcement are strongman regimes, while personalist regimes that rest on party support represent bosses. Regimes that exercise more collectivized rule are juntas if they rely on military power, or machines if they derive their political support from a party.

The Argument

In this section, I apply the logic of two-level games described above to explain authoritarian regimes' tendencies to reach and comply with international treaties. Specifically, I
map the primary independent variable—the size of domestic win set or the degree of domestic institutional constraints—onto Lai and Slater's authoritarian regime typology.

*Power Concentration and Institutional Constraints*

Although dictatorships are often stereotyped as one-man rule, in actuality no leader rules entirely by himself (Franz 2008, 8). While all dictators experience few or no constraints from the general electorate, scholars agree that most autocratic leaders depend on the support of domestic actors no less than their democratic counterparts (Bueno de Mesquita et al 2003; Weeks 2008). The difference is that in authoritarian regimes, the domestic base is much smaller and usually represents fewer societal interests.

As pointed out by Lai and Slater (2006), authoritarian regimes’ domestic bases vary in size, and as a result, so does the degree of their domestic win set. The size of a leader's base determines her international negotiating power. Authoritarian leaders with a relatively small domestic base—personalist dictators—may have a tighter grip on power domestically, yet such almost unlimited domestic power translates into a weakness at the international bargaining table. Unable to use the domestic base's disapproval as a bargaining chip, such leaders in effect have the most flexible negotiating position, which may get exploited by other negotiators. Unconstrained (or almost so) in their negotiating position, such leaders are less likely to stall negotiations in the view of minor amendments. With no need to answer to anyone but themselves, personalist dictators may also be able to prevent negotiation collapse even in view of major amendments, as they can make counter-proposals on the spot.

In contrast, authoritarian leaders with a relatively large domestic base—oligarchic autocrats—have smaller win sets: agreements they make may require approval of domestic veto
players, such as party elites, and are more likely to fail domestic ratification processes as the initial proposal gets amended. Answerable to a domestic base, oligarchic leaders are also less flexible when it comes to accepting minor amendments and may be unable to make prompt counter-offers, as those may require domestic approval. The win set logic posited in Proposition 1 then leads to the following hypothesis regarding the negotiating behavior of authoritarian regimes.

**Hypothesis 1:** Strongmen and bosses are more likely to enter international treaties than democracies, juntas or machines.

The relatively weak international bargaining position of personalist dictators will also decrease their overall ability to reach agreements that are close to their ideal point. Unable to rely on the implicit threat of delaying or stalling negotiations due to the need to consult with the domestic base, personalist leaders are more likely to see the agreement being moved away from their ideal point one minor amendment at a time. Lack of satisfaction with the final agreements, in turn, results in a higher non-compliance rate among personalist leaders.

Oligarchic leaders, on the other hand, are more effective at extracting the concessions they want, due to their higher credibility of playing the "all or nothing" card, in reference to the inflexibility of the domestic base. Able to extract more favorable terms of international agreements, oligarchic leaders will naturally have a higher subsequent compliance rate with the agreements that they reach. Proposition 2 then yields the following hypothesis concerning authoritarian regimes' treaty compliance.

**Hypothesis 2:** Strongmen and bosses are less likely to comply with international treaties than democracies, juntas or machines.
The Locus of Infrastructural Power and Institutional Constraints

Let us next examine the degree of institutional constraints created by the second dimension of Lai and Slater (2006) typology--the locus of infrastructural power. I argue that military dictators are more constrained or have smaller win sets than party-based autocrats, due to their higher risk of irregular removal or a removal from office by irregular means, such as a coup or an assassination (Goemans 2004, 2008). The threat of an irregular removal serves as a strong constraint on leaders' power as such removals are commonly followed by leader's imprisonment, exile or execution. As Kebschull (1994) has pointed out, most coup d'états are performed by the military. Frantz (2008) argues that in military regimes, elites have greater access to the security forces than do elites in civilian regimes. After all, elites in military dictatorships are likely to be military commanders. This means that when it comes to executing a coup, elites in military regimes have an important advantage over civilian elites: easy access to troops and weapons. This advantage can be effectively used to oust a leader who is not living up to their expectations. The threat of an irregular removal, in turn, forces military leaders to listen to elite demands, thus restraining their win sets.

Leaders of single-party regimes, on the other hand, are less threatened by irregular removals, and as a result have larger win sets. First, single-party leaders are able to moderate elite's influence using the party institutions to their advantage. As Geddes (2003: 72) points out, in party-based regime, the influence over policy and access to political power and government jobs lies with the party. Since the only means of promotion is by proving loyalty to the party, all positions of power (both military and civilian) are filled with supporters whose loyalty is constantly reevaluated (Weeks 2008). For example, Joseph Stalin, leader of the Soviet Union, was known for regularly purging suspected dissenters from the Politburo, which even included a
close friend and one of the highest-ranking members of the party, Nikolai Bukharin. As a result, the party leader has little reason to fear a coup coming from the elites.

Party ideology may serve as a similar power-maximizing tool for civilian dictators. Since regime legitimacy is so closely linked to ideology, the leader can always invoke ideological arguments in defense of her actions. When leader's decisions are presented to the domestic audiences as “the only right choice” in terms of ideology, these decisions are less likely to be criticized or challenged. Military dictators, lacking either a party infrastructure to purge the disloyal elites, or an ideological cover that can be used to justify more frivolous decisions, find themselves more constrained by their domestic elites than civilian dictators.

Following the logic of the two-level game, a relatively weak hold on domestic power by military dictators translates into a relatively strong position in international negotiations. As a result, Proposition 1 suggests that military leaders (strongmen and juntas) will sign fewer agreements than party-based dictators (bosses and machines).

*Hypothesis 3: Bosses and machines sign more agreements than democracies, strongmen or juntas.*

Following the logic spelled out above, a stronger bargaining position also translates into the ability to extract more favorable agreements, increasing the probability of future compliance. As a result, the greater institutional constraints on the leaders of military regimes will lead to such regimes' exhibiting higher compliance with the treaties that they sign. This leads to the following prediction derived from Proposition 2.

*Hypothesis 4: Bosses and machines are less likely to comply with international agreements than democracies, strongmen or juntas.*
Figure 1 presents a visual illustration of the theoretical argument made above, arranging the five regime types (including democracies) on a single dimension, from least to most constrained. *Democracies*, long identified as a regime type with the strongest institutional constraints, are located on the far right of this range. *Juntas*, constrained as a result of both a lower power concentration and the threat of an irregular removal, are the most constrained autocracy. *Strongmen*, unconstrained in terms of power concentration, yet constrained by the threat of an irregular removal, and *machines*, whose constraints are the inverse of that, are located to the left of *juntas*. Finally, *bosses* are constrained neither on the power concentration nor on the infrastructural power dimension and are located the furthest to the left.

[Figure 1 Here]

**The Role of Strategic Context**

Finally, we must not forget that bargaining and compliance with agreements are both strategic behaviors. In other words, in making each of these decisions, the leader of state A takes into account the likely actions of state B’s leader. Thus, state A is less likely to reach an agreement with state B whose leader has a strong negotiating position (small win set or large institutional constraints). Negotiations with less constrained leaders, on the other hand, are more likely to result in agreements.

*hypothesis 5*: *All regimes are more likely to reach international agreements when negotiating with less institutionally constrained leaders. Thus:*

*b) It is easier to reach an agreement with strongmen and bosses rather than democracies, juntas, or machines:*
c) It is easier to reach an agreement with bosses or machines than with democracies, strongmen, or juntas.

Extending the same logic to the decisions to comply with agreements, we can expect that state A's compliance will be directly related to that of state B. As established above, leaders with large domestic win sets or low institutional constraints are less likely to comply with the agreements they sign, as the level of leaders' constraints is negatively correlated with the distance between leader's ideal point and the final agreement reached. Lower satisfaction with the agreement will, in turn, lead to higher level of noncompliance. State A, however, is unlikely to stay in the agreement and continue to comply when State B reneges. As a result, we can expect that states, whose agreement partners face weaker domestic constraints, will themselves exhibit lower, on average, rate of compliance.

Hypothesis 6: All regimes are more likely to comply with international agreements when the other party to the agreement faces higher institutional constraints. Thus:

a) States will be more likely to comply with agreements made with democracies, juntas or machines rather than strongmen or bosses;

c) States will be more likely to comply with agreements made with democracies, strongmen or juntas rather than with bosses or machines.

Data and Methods

I test my hypotheses using data from the ICOW project. The ICOW project includes data on contentious territorial, maritime, and river issues, currently available for the Western
Hemisphere, Latin America, and the Middle East. The dataset includes observations on which there is explicit evidence that “official representatives of at least one state make explicit statements claiming sovereignty over a piece of territory (land or water) that is claimed or administered by another state” (for a more detailed description, see Hensel et al 2008, 16). Territorial claims are related to questions of sovereignty over a specific land or island territory, maritime claims concern disagreements over the ownership or usage of a maritime zone, and river claims involve the usage and/or navigation rights of a river crossing states boundaries. Territorial claims coded by the ICOW project include data from 1816 to 2001, whereas maritime and river claims are limited to 1900 to 2001 (Hensel 2001; Hensel et al 2008).

The ICOW project collects data on all ratified bilateral and multilateral treaties related to management of the issues in a claim. Each observation includes information on whether each party subsequently complied with the agreement, as well as data on the salience of the issue at stake, whether the settlement involved equal division of the resource, and what types of negotiations took place (bilateral, or with the involvement of a third party (a state or an IO).

The unit of analysis in this study is a directed-dyad-settlement-attempt-year in the first estimation stage (making an agreement) and directed-dyad-year for the second stage (compliance). Overall, the ICOW dataset codes a total of 963 peaceful agreements on

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10 As a result of these spatial limitations, the data is characterized by selection on an independent variable. As shown by King, Keohane, and Verba (1994: 137), however, such selection does not pose serious problems for empirical analyses.

11 The advantage of using data on issue-based agreements (the ICOW data) rather than military alliances (e.g., Alliance Treaties Obligations and Provisions) is in the substantially larger number of cases as well as in a broader range of issues.
substantive issues over 204 different claims that have been ratified by both parties\textsuperscript{12}. Each agreement enters my dataset twice (once for each state that signed it), which results in 1639 observations for the time period between 1816 and 2001, after the missing data is accounted for.\textsuperscript{13}

In the primary analysis, the hypotheses are tested employing a sample of all states, including democracies. Including democracies in the analysis allows for a comparison between the effects of authoritarian and democratic institutions. Taking into account the large body of research related to the effects of democratic institutions, including democracies in the dataset provides for a good reference against which we can evaluate the behavior of authoritarian regimes. Including democracies is common in studies that compare the effects of domestic institutions on international behavior (Lai and Slater 2006; Peceny et al 2002). To compare the coefficients among different types of authoritarian regimes, I supplement my analysis with a series of Wald chi-square post-estimation tests.\textsuperscript{14} For the purpose of robustness checks, I ran additional analyses on the subsample that excludes democracies (not presented here, but available upon request). The results are robust to this specification.

I use a Heckman two-stage probit model as the primary method of analysis. Possible dependence across cases is captured by clustering of standard errors by country. The Heckman

\textsuperscript{12} ICOW differentiates between three types of agreements: substantive, functional, and procedural. Substantive agreements include settlement of ownership of part or all of the disputed area. Functional agreements involve formulating rules on management of the issue in question (e.g., establishment of demilitarized zones, guarantees of free commerce, or navigation through the territory). Finally, procedural agreements relate to establishing future procedures to settle the claim (e.g., negotiations on submitting the claim to the World Court or some other body) (Hensel 2005, 2). Since substantive agreements is the only agreement type that places serious requirements on the parties, I limit my analysis to the substantive agreements.

\textsuperscript{13} If a dyad has multiple settlement attempts per year, all of these enter into the dataset as separate observations. The results, however, are robust to alternative specifications of keeping only one observation per year.

\textsuperscript{14} Note that Wald chi-square post-estimation tests are statistically equivalent to changing the reference category.
probit employs a two-stage estimation approach that allows to control for non-random selection processes (Heckman 1979; Reed 2000). It first calculates the effect of each covariate on the first-stage outcome (agreement), and then the second outcome (compliance), given the observation was selection into the second stage (agreement was made).

Heckman probit also estimates the correlation, \( \rho \), between the two outcomes’ disturbances. In the context of this study, it might be useful to think of \( \rho \) as the leader's latent tendency to comply with treaties, caused by domestic institutional constraints. If we find this term to be positive, this would mean that the unobserved factors that increase the likelihood of signing a treaty also make states more likely to comply. If \( \rho \) is negative, this would mean that the factors that make states more likely to sign a treaty also make them less likely to subsequently comply. According to the theory of this paper, this would be the case for military regimes, who are more likely to sign and less likely to comply, in the absence of institutional veto-players. It is worth noting, however, that since the estimator produces \( \rho \) as a single average, we cannot directly test hypotheses about regime-specific intent to comply in the confines of this paper.

**Dependent Variables**

The dependent variable for the first stage--*Agreement*--equals 1 if a settlement attempt results in a substantive agreement (679 out of 1,639, or 41%) and 0 otherwise. The dependent variable for the second stage--*Compliance*--equals 1 if the agreement is complied with (505 of
679, or 74%) and 0 if it is not. More specifically, compliance equals 1 if the terms of the agreement, such as transferring the territory, or recognizing the rights of the other state over a given maritime area, have been upheld for the time period specified in the agreement. If no time period is specified, Compliance is coded as 1 if the terms have been complied with for at least five years. Otherwise, Compliance is coded as 0. For example, a US-Mexico 2001 agreement over the use of the Rio Grande is coded as complied with, since it has been abided by both claimants. An example of non-compliance is the 1991 agreement between Belize and Guatemala over the use of territorial waters, reneged on by the Guatemalan government.

**Independent Variables**

The primary independent variable is a state’s *Regime Type*, measured using Lai and Slater's (2006) data. These variables are coded for the time period 1816-2001. Lai and Slater first code states as either democratic or nondemocratic using 5 on the *Polity2* score of the Polity data as the cut-off value (Marshall et al 2007). The despotic power dimension of Slater's (2003) typology is coded using the *Executive Constraints* variable from the Polity data, while the infrastructural power is measured using the *Regime Type* variable from the Banks’ Cross National Time Series Archive. Nondemocratic regimes are coded as *Personalist* if they scored 1 or 2 on the *Executive Constraints* score, and as *Oligarchic* (collective) otherwise.

Banks’ Cross National Time Series Archive codes whether a government is controlled by civil or military institutions for the time period between 1816 and 2001. A non-democracy is

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15 The ICOW codebook (pp 38-39) points out that the measure of state-level compliance is not always precise. Namely, in many cases, non-compliance by one state leads to non-compliance on the part of the other. However, I do not view this as a serious problem for this study. If anything, it will bias the results towards the null hypotheses, since violations by non-compliant types of regimes will trigger violation on the part of the more compliant ones.

16 The analysis is robust to changing this threshold.
coded as a *Party-based* regime if the Banks data refers to it as a “government controlled by a nonmilitary component of the nation’s population” (Cross-National Time Series Data Archive 1997). A regime is coded as *Military* if it is (1) under direct military control or is (2) effectively under military control. All states are then coded on whether they are *Democracies, Machines (Party*Collective), Bossism (Party*Personalist), Junta (Military*Collective), or Strongman (Military*Personalist).* Side B regime types are coded in the same manner.

Note that the data contains 128 observations of states that changed regime type within 5 years of signing an agreement. As the ICOW dataset truncates the compliance variable at a 5-year period with no specific information as to how long compliance actually lasted\(^{17}\), it is unclear whether these observations' regime types should be coded as pre- or post- regime change types in the compliance equation. Therefore, I present two sets of empirical results with alternative codings of these variables. The post- regime change variables then include an additional regime category of *New Democracy*---regimes that changed to a democratic regime. According to the literature, new democracies behave differently from democracies with long-established regime institutions (Mansfield and Snyder 2005; Weeks 2008), which justifies separating these regimes into their own category. These observations also provide an interesting opportunity for examining the effect of regime type on compliance using a natural experiment approach, which I discuss more in the empirical section.

**Control Variables: Selection Equation**

Formation of international agreements is largely covered in the bargaining literature on war termination (Gent and Shannon 2011, Lefler 2012). These studies model dispute settlement

\(^{17}\) For example, a regime that failed to comply after only 1 year and a regime that reneged after 5 years will obtain the same compliance value of 0.
as a strategic phenomenon, whose outcome is determined by the dyadic variables, such as relative capabilities between the disputing parties, private information, as well as the history of prior relationship. The empirical model includes the following control variables to account for these explanations.

First, I control for the disputant's relative capabilities. *Capabilities Ratio* is constructed using the Composite Index of National Capabilities (CINC) scores from the COW project, and equals the ratio of state A's capabilities and the total capabilities of state A and state B (*Capabilities Ratio* = Capabilities A/(Capabilities A + Capabilities B)). While most of the literature agrees that the balance of power plays an important part in international negotiations, there is little agreement on the direction of its effect. Some argue that peaceful negotiation is more likely when the disputants are at relative parity (Ferris 1973, Siverson and Tennefoss 1984), while others find the opposite effect (Bennett and Stam 2004, Kim 1991, 1992; Moul 1988, Weede 1976). The effect of *Capabilities Ratio* is likely to be non-linear, changing as either state A or state B gains preponderance of power and moves away from parity. To capture this effect, I also include the *Squared Capabilities Ratio* term.

I proxy disputants' private information using a measure of shared alliance membership from the Alliance Treaties Obligations and Provisions dataset (Leeds, Ritter, and Mitchell 2002). *Alliance* equals 1 if the disputants share an alliance membership and 0 otherwise. As shown by Leeds (2003b), shared alliance memberships help alleviate the private information problem about the other party's capabilities and intentions. Improved information, in turn, is associated with increased probability of a peaceful settlement (Fearon 1995).

Finally, the literature shows that the likelihood of a successful peaceful negotiation decreases once states have started on the militarized path (Hensel 1999, 2001; Leng 1983). The
reverse holds as well: the likelihood of a peaceful settlement is greater for states that have not experienced a militarized dispute (Hensel 1999, 2001). Finally, each additional failure at reaching a settlement decreases the likelihood of a future attempt's success (Hensel et al 2008). To account for previous history of the claim, I include controls for the *Number of Previous Settlement Attempts* and for previous militarized disputes over the claim at stake. The latter variable—*Peace*—is an indicator variable coded as 1 if the disputants have not experienced a dispute over the claim at stake in the past 5 years.

**Control Variables: Compliance Equation**

The literature explains compliance with international treaties in several ways. Many view compliance as either a function of the agreement's terms or as a result of circumstances beyond state control (Chayes and Chayes 1993, Leeds et al 2008). Chayes and Chayes (1993), for example, argue that most of noncompliance can be attributed to one of three factors: (1) state error resulting from treaty language ambiguity, (2) lack of state capacity, and (3) exogenous economic or political shocks. Hill (2012) finds empirical support for the second factor, demonstrating that states are more likely to comply with human right treaties in the presence of strong domestic legal institutions. Leeds (2003a) provides empirical evidence for the third factor by showing the correlation between noncompliance with alliance treaties and several types of exogenous shocks, such as regime change or change in capabilities.

I account for the exogenous shocks explanation by including an indicator variable that captures a recent regime change in state A. *Regime Change A* is constructed using Polity IV data and equals 1 if a state has undergone a regime change in the previous year. Otherwise, this variable equals 0. *Regime Change* also helps account for the state capacity explanation. The built-up of state institutional capacity requires political stability, which is unlikely in states that
have recently experienced a regime change. The effect of power change is captured by inclusion of the *Capabilities Ratio* variable in the selection equation.

Another theoretical approach links compliance with international treaties to the features of the issue at stake, the treaty provisions, or to the conditions surrounding the signing of the treaty (Downs, Rocke, and Barsoom 1996; Mitchell and Hensel 2007; Hensel et al 2008). Some argue that compliance is largely driven by the shallowness of the treaty, and that high rates of compliance with international treaties simply results from the fact that most treaties are costless or do not require states to deviate from their pre-treaty behavior (Downs, Rocke, and Barsoom 1996). I account for this type of explanations in two ways. First, I limit the scope of my analysis to substantive treaties--treaties that regulate the division of the issue at stake rather than just regulating its temporary use or making arrangements for future negotiations. Second, I include a control for *Issue Salience*. The measure of *Issue Salience* is based on six indicators (e.g., valuable raw materials, ethnic populations, strategic value) for each type of issue, each contributing one point for each claimant. This results in *Salience* ranging from 0 to 12, with higher values corresponding to greater salience. Previous studies have found an inverse relationship between issue salience and compliance (Mitchell and Hensel 2007, Hensel et al 2008). Mitchell and Hensel (2007) have also demonstrated that states are more likely to comply with binding agreements than with ones that have no binding power. Therefore, I include an indicator variable *Binding Agreement*.

Table 2 provides summary statistics for all variables.

[Table 2 here]
Empirical Analysis

The main empirical results are presented in Table 3. Models 1 and 3 display the estimations of a Heckman probit analysis that accounts for sample selection, and Models 2 and 4 provide robustness checks estimated using an ordinary probit model for each stage. The first column of each model presents the tests of the hypotheses related to agreement formation, while the second columns present the results of testing the hypotheses related to compliance. Models 1 and 2 are estimated using the same regime type variables in both agreement and compliance equations, while in Models 3 and 4 the regime variables are coded separately at agreement and compliance stages, allowing for the possibility of regime change.

[Table 3 here]

Let us start with evaluating the support for the hypotheses regarding the probability of reaching agreements, Hypotheses 1, 3, and 5. The coefficients on both Boss A and Boss B are positive and statistically significant in all agreement equations ($p<0.05$), which indicates that bosses are more likely to enter international agreements than democracies, and that the likelihood of reaching an agreement for any side A is greater when it is negotiating with a boss rather than with a democracy. The coefficients on Strongman, Machine, and Junta in the meantime, are not statistically significant for both sides A and B, suggesting no difference in the probabilities of reaching agreements for these regimes in comparison to democracies. This result sheds new light on the literature, highlighting that democracies may not be qualitatively different from all authoritarian regimes, but just some of them (in this case, bosses). While this may provide some evidence for Hypothesis 1 and some direct support for Hypothesis 5a, Hypotheses 1 and 3 also call for more specific comparisons of the coefficients among the four autocratic types. Such comparisons can be conducted using Wald's chi-square post-estimation
tests. These comparisons, presented in Table 5, fail to provide further support for Hypotheses 1 and 3, revealing no statistically distinguishable differences among the probability of agreement formation for different types of autocracies, for side A. When it comes to evaluating Hypothesis 5, on the other hand, we see that a state negotiating with either a strongman or a junta has a lower probability of reaching an agreement than if it were negotiating with a boss. There is no statistically significant difference between the probabilities of reaching an agreement when negotiating with a boss vs. a machine. This provides support for Hypothesis 5b, which posited that negotiating with more constrained states—strongmen or juntas—is more likely to result in an agreement than negotiating with less constrained states, such as bosses or machines.

[Table 4 here]

Next, let us evaluate the evidence for the compliance related hypotheses—Hypotheses 2, 4, and 6. The Compliance models of Table 4 show that Strongman and Boss are negative and statistically significant for side A, and Strongman and Machine are negative and statistically significant for side B in most models. This indicates that strongmen and bosses are less likely to comply with international agreements than democracies. Moreover, all regime types exhibit lower compliance rates, when they are in an agreement with either bosses or machines rather than with democracies. Comparisons among authoritarian regimes further reveal that strongmen, bosses, and machines have statistically lower compliance rates than juntas. Such results are partially consistent with Hypothesis 2, which posited that strongmen and bosses have lower compliance rates than regimes with more collective power arrangements. The results related to decreases in compliance when side B is a boss or a machine, on the other hand, point to the importance of the infrastructural power dimension, supporting Hypothesis 6b. Hypothesis 6a,
which posited variation in compliance based on the power concentration dimension, is not supported by the analysis.

The substantive significance of the results can be explored in Figure 2, which presents predicted probabilities of reaching an agreement (in red) and compliance (in blue) for each regime type. First, it is worthwhile to note that consistent with previous literature, democracies have the lowest rate of reaching agreements--around 30 percent--and one of the highest compliance rates of around 85 percent. Meanwhile, bosses are characterized by both the highest rate of reaching agreements--around 45 percent--and the lowest compliance rate of around 77 percent. In their rate of compliance, bosses are closely followed by strongmen with the rate of about 78 percent. In addition, we see that the probabilities of reaching agreements and compliance vary substantially, depending of side B regime type: holding all else equal and replacing side B with a boss rather than a democracy results in dramatic increases in the likelihood of an agreement as well as decreases in the likelihood of compliance by all regimes.

Finally, most of the control variables are statistically significant or at least act in the expected directions. Alliance is positive, consistent with the argument that better information among the parties increases the probability of a peaceful agreement. Peace is also positive, supporting the expectation that militarization decreases the probability of a peaceful settlement (Hensel 1999, 2001; Leng 1983). The Number of Previous Settlement Attempts is negative in most models, which supports the previous findings that the likelihood of a peaceful settlement decreases with each additional settlement failure (Hensel 1999, 2001). Finally, Capabilities Ratio and its square term are negative and positive, respectfully, consistent with the expectation that states are most likely to reach agreements when the power is unbalanced and least likely to agree at parity. Issue Salience is negative and statistically significant in the compliance
equation, which implies that, once an agreement is reached, issue salience has a negative effect on the likelihood of compliance. Finally, Binding Agreement is positive, indicating that states are more likely to comply with binding agreements.

**Natural Experiment**

As noted earlier, the data contains 128 observations in which states experienced a regime change—a change in the main independent variable—within 5 or fewer years after an agreement was signed. Unfortunately, since the compliance variable is truncated at 5 years, the current data does not allow for a precise separation of these cases into those in which a regime change occurred before or after a violation in the agreements, if any. Yet for cases in which a regime change occurred prior to any potential violations, it would be incorrect to attribute the violation or compliance to the previous regime type. If we assume, however, that the regime changes always preceded an instance of non-compliance, this would provide for a unique natural experiment allowing us to study compliance as exogenous to agreement formation, as the new regime type following the regime change would be unrelated to reaching the agreement. In other words, the natural experiment isolates the effect of regime type on compliance, obviating the necessity to model the preceding stage of agreement formation.18 Table 5 presents a cross-tabulation between regime type and compliance for these cases.

[Table 5 here]

The first thing that catches one's eye is that strongmen have the lowest compliance rate of 12 out of 21, or 57%. This rate is noticeably lower than those of all other regime types. Despite

18 I would like to thank the anonymous reviewers for suggesting the inclusion of a natural experiment.
the low number of observations in each cell, the differences between *strongmen* and *machines*, as well as *strongmen* and *juntas*, are statistically significant at $p<0.1$ and $p<0.05$ levels of significance, respectfully, using a chi-square test. Although not a statistically significant difference, *machines* and *juntas* also have higher rates of compliance than *bosses*--the other personalist regime type. This provides further support for *Hypothesis 2*, which expected differences in compliance along the power concentration dimension.

Second, note that *new democracies* have the second lowest compliance rate among all regime types--they complied with 18 out of 24, or 75%, of agreements inherited from the previous regime type. This result is consistent with the previous literature on the instability of newly democratized regimes (Mansfield and Snyder 2005, Weeks 2008). Finally, these results fail to provide support for *Hypothesis 4*, which expects military regimes to exhibit a higher compliance rate than party-based regimes.

While providing some insights, these results should be taken with caution, due to the low number of observations as well as the assumptions related to the natural experiment. Moreover, isolating compliance from the preceding stage of reaching agreements disregards the possible endogeneity between the stages of reaching an agreement and subsequent compliance. By using the knowledge of leader's win set size at the stage of negotiations to make predictions about the likelihood of both an agreement and future compliance, this paper's theory derives predictions based on the regime type of the leader who conducted the original negotiations. The central idea--that leaders with small win sets sign more favorable agreements, which will

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19 Isolating compliance from the agreement stage is not necessarily incorrect. The view that agreements remain equally binding even in case of a change of circumstances is consistent with the legal concept of *pacta sunt servanda*, which presents a rival theoretical approach to the theory developed here (Leeds and Savun 2007).
naturally result in higher compliance rates than less favorable agreements—holds independent of the size of post-regime change win set.

Further examination of these 128 cases reveals, however, that in this particular case, the natural experiment design may not undermine the logic of the two level games, as most of these observations (107, or 84 percent) experienced a regime change, while remaining the same regime type (e.g., a transition from a *boss* to another *boss*). Thus, the results of the experiment provide further support for the theory, allowing us to isolate compliance from the idiosyncrasies of the leader that signed the agreement, while preserving the institutional continuity.

**Discussion**

This paper contributes to the literature in two ways. First, it extends the research on non-democracies by moving them from a mere reference category into the spotlight of analysis. I combine Lai and Slater's (2006) two-dimensional authoritarian typology with Putnam's (1988) logic of two-level games to build a theory of variation in regime tendencies to reach and comply with international agreements. I find that *bosses* are more likely to reach agreements than *democracies*, and both *bosses* and *strongmen* are less likely to comply with agreements than *democracies or juntas*, due to a higher power concentration in the hands of the chief executive. In fact, *juntas* perform better on compliance than any other authoritarian regime and are statistically indistinguishable from *democracies*—a novel finding that highlights the importance of a more refined authoritarian typology.

The use of a more refined typology also points to the importance of a second and less frequently explored source of authoritarian variation—infrastructural power. I find that states are less likely to comply with agreements that they sign with *bosses* and *machines* as opposed to
those with *democracies*. I attribute the latter finding to a higher risk of irregular removal common to military regimes. I also find that reaching and complying with agreements are strategic behaviors and depend on the regime type of the other negotiating party. Revisiting the empirical puzzle set up at the beginning of the paper, we can now be more confident in arguing that Yanukovich's rash decision to concede on the Crimean lease was, at least in part, attributable to Ukraine's reversal from a fledgling *democracy* to a *bossism*.

The broader implication is that, in line with other recent studies, I show that the study of IR can gain insights by employing a more nuanced typology of authoritarian regimes (Weeks 2008, Lai and Slater 2006, Savun and Cook 2011). This paper also demonstrates the importance of looking at both dimensions of Slater's (2003) authoritarian typology. While power concentration has been previously shown to be a significant source of variation in foreign policies of authoritarian states (e.g., Bueno de Mesquita et al 2003), this paper shows that the infrastructural power is also important (Lai and Slater 2006).

The second contribution of this paper is in its modeling approach. I model compliance as endogenous to reaching an agreement using the logic of a two-level game (Putnam 1988). The larger contribution here is in line with other recent appeals to build more nuanced theoretical models (Fearon 1998, Smith 1996, Reed 2000, Lemke and Reed 2001, Danilovic 2001, Schultz 2001, Reed and Clark 2002). Building a unified model of reaching agreements and complying with them helps account for the selection bias that arises as a result of a failure to include all the relevant cases in the analysis.

Finally, this paper leads to some insightful policy implications. It demonstrates, for example, that reaching a satisfactory agreement may not ensure future compliance. In fact, the regime types that are the easiest to persuade in international negotiations may also turn out to be
the biggest non-compliers. Since agreement's success ultimately depends on compliance, one might be wary of imposing agreement terms that move the final agreement too far from the other's ideal point, as even if signed, such agreements are unlikely to be complied with.

**BIBLIOGRAPHY**


### Tables and Figures

Table 1. Slater’s (2003) Institutional Typology of Authoritarian Regimes

<table>
<thead>
<tr>
<th>Power Concentration</th>
<th>Oligarchic</th>
<th>Personalist</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Who Decides?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Party</td>
<td>Machine</td>
<td>Bossism</td>
</tr>
<tr>
<td></td>
<td>444 (133/195)</td>
<td>203 (72/106)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infrastructural Power</th>
<th>Party</th>
<th>Machine</th>
<th>Bossism</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Who Executes?)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military</td>
<td>Junta</td>
<td>Strongman</td>
<td></td>
</tr>
<tr>
<td></td>
<td>75 (26/31)</td>
<td>128 (30/44)</td>
<td></td>
</tr>
</tbody>
</table>

Cells represent the total number of directed-dyad-settlement-attempt-years from 1816-2001 within the estimation sample in each category. Numbers in parentheses represent the number of agreements that were complied with out of the total number of agreements reached. The dataset also includes 789 (244/303) democracies used as a reference category.

Examples from each category:
- Machine: China (1976-present), Taiwan (pre-1996), Tunisia, Senegal (pre-2000).
- Bossism: North Korea (Kim), China (Mao), Zimbabwe (Mugabe), Malaysia (Mahathir).
- Junta: Burma, Algeria, Greece (pre-1974), Argentina (pre-1983).
- Strongman: Chile (Pinochet), Pakistan (Zia), Zaire (Mobutu), Panama (Noriega).
Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
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<td>0</td>
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<td>Compliance</td>
<td>Agreement (n=679)</td>
<td>0.74</td>
<td>0.44</td>
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Note: Summary statistics are limited to the main model's estimation sample (N=1639).
Table 3. Selection Model of Reaching Agreements and Compliance (1816-2001)

<table>
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<tr>
<th></th>
<th>Agree</th>
<th>Comply</th>
<th>Agree</th>
<th>Comply</th>
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<th>Comply</th>
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<td><strong>Strongman A</strong></td>
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<td></td>
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<td>0.58***</td>
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<td><strong>CINC Ratio</strong></td>
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<td>-1.43***</td>
<td>-0.35***</td>
<td>-1.43***</td>
<td>(0.45)</td>
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<td>(0.45)</td>
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<td>1.43***</td>
<td>1.34***</td>
<td>-1.43***</td>
<td>(0.43)</td>
<td>(0.42)</td>
<td>(0.43)</td>
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<td>0.13</td>
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<tr>
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<td>(0.12)</td>
<td>(0.11)</td>
<td>(0.12)</td>
<td>(0.11)</td>
<td></td>
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<tr>
<td><strong>Peace (5 yrs)</strong></td>
<td>0.56***</td>
<td>0.55***</td>
<td>0.56***</td>
<td>0.55***</td>
<td>(0.07)</td>
<td>(0.07)</td>
<td>(0.07)</td>
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<tr>
<td><strong>Prev. Attempts</strong></td>
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<td>-0.02***</td>
<td>-0.02***</td>
<td>-0.02***</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
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</tr>
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<td><strong>Constant</strong></td>
<td>-0.51***</td>
<td>1.40***</td>
<td>-0.42***</td>
<td>1.22***</td>
<td>0.51***</td>
<td>1.43***</td>
<td>-0.42***</td>
<td>1.23***</td>
</tr>
<tr>
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<td>(0.17)</td>
<td>(0.23)</td>
<td>(0.16)</td>
<td>(0.15)</td>
<td>(0.17)</td>
<td>(0.22)</td>
<td>(0.16)</td>
<td>(0.14)</td>
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<table>
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<th><strong>Rho</strong></th>
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<td><strong>Log Likelihood</strong></td>
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<td><strong>Wald Chi²</strong></td>
<td>48.22***</td>
<td>54.15***</td>
<td>152.52**</td>
<td>47.21***</td>
<td>49.67***</td>
<td>152.52**</td>
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<tr>
<td><strong>N (2nd stage)</strong></td>
<td>1639 (679)</td>
<td>739</td>
<td>1670</td>
<td>1639 (679)</td>
<td>739</td>
<td>1670</td>
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</table>

Two-tailed: * p ≤ 0.10, ** p ≤ 0.05, *** p ≤ 0.01. Democracy is used as the reference category.
Table 4. Model Post-Estimation. Differences Among Regime-Type Coefficients

<table>
<thead>
<tr>
<th>Side A</th>
<th>Democracy</th>
<th>Strongman</th>
<th>Boss</th>
<th>Machine</th>
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</thead>
<tbody>
<tr>
<td>Agreement</td>
<td>0.18</td>
<td>6.05**</td>
<td>2.07</td>
<td>0.98</td>
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<tr>
<td>Boss</td>
<td>1.41</td>
<td>0.13</td>
<td>1.22</td>
<td>0.18</td>
</tr>
<tr>
<td>Machine</td>
<td>1.41</td>
<td>0.25</td>
<td>0.06</td>
<td>0.82</td>
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<tr>
<td>Junta</td>
<td>0.02</td>
<td>3.71*</td>
<td>3.98**</td>
<td>3.14*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Side B</th>
<th>Democracy</th>
<th>Strongman</th>
<th>Boss</th>
<th>Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement</td>
<td>0.15</td>
<td>4.07**</td>
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<td>0.05</td>
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<td>Boss</td>
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<td>Machine</td>
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<td>0.17</td>
<td>2.41*</td>
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<td>Junta</td>
<td>1.08</td>
<td>0.40</td>
<td>1.52</td>
<td>3.14*</td>
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</table>

Two-tailed: * $p \leq 0.10$, ** $p \leq 0.05$; One-tailed: +$p<0.1$.

Cells show Wald's Chi-squares (1 d.f.) based on Model 1 of Table 3.
Table 3. States That Have Undergone a Regime Change in the 5 Years Since Signing Agreement.

<table>
<thead>
<tr>
<th>Compliance=0</th>
<th>New Democ.</th>
<th>Strongman</th>
<th>Boss</th>
<th>Machine</th>
<th>Junta</th>
<th>Total</th>
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<td>9</td>
<td>5</td>
<td>9</td>
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<td>31</td>
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<tr>
<td></td>
<td>25%</td>
<td>43%</td>
<td>23%</td>
<td>19%</td>
<td>15%</td>
<td>22%</td>
</tr>
<tr>
<td>Compliance=1</td>
<td>18</td>
<td>12</td>
<td>17</td>
<td>39</td>
<td>11</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>57%</td>
<td>77%</td>
<td>81%</td>
<td>85%</td>
<td>76%</td>
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<tr>
<td>Total</td>
<td>24</td>
<td>21</td>
<td>22</td>
<td>48</td>
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<td>100%</td>
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<td>100%</td>
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</tr>
</tbody>
</table>
Figure 1. Regime Types and Domestic Institutional Constraints

*Authoritarian Regimes*

- Bosses
- Strongmen Machines
- Juntas
- Democracies

Low Institutional Constraints  High Institutional Constraints
Figure 2: Predicted Probabilities of Agreement and Compliance (Given an Agreement was Reached) by Regime Type

Note: The predicted probabilities for reaching agreements and compliance were simulated, by varying regime type while holding all other variables at their mean and modal values (King, Tomz, and Wittenberg 2000). Whiskers represent 90% Confidence Intervals. Red indicates predicted probabilities of reaching an agreement. Blue indicates predicted probabilities of compliance given an agreement had been reached. Bars Represent 90% CIs.